hematopoietic stem cell transplantation (HSCT). Fluoroquinolones has been recommended for prevention of bacterial infections in HSCT recipients. Our center has used oral ciprofloxacin and penicillin V, started from beginning of preparative regimen until engraftment, for bacterial infection prophylaxis. The objective of this study was to analyze the prevalence and risk factor of breakthrough bacteremia during neutropenic episodes in childhood HSCT patients. There were 215 patients (M:F=1.26:1) with a median age of 8.32 years (range, 0.51-21.64 years) during 2006-2014. The common underlying diseases were thalassemia and acute leukemia. The median day of receiving antibiotic prophylaxis was 11 days (range, 1-38 days). The most common reason for discontinuation of antibiotic prophylaxis was febrile neutropenia (64.5%). Microbiologically documented bacterial infections were found in 66 patients (30.7%) which 33 patients (15.3%) had bacteremia. *Escherichia coli* (n=13) was the most commonly isolated gram negative bacteria while *Staphylococcus spp.* (n=3) and *Streptococcus spp.* (n=3) were the two most common gram positive bacteria. Risk factor for bacteremia was receiving ATG-containing regimen (OR 2.67; 95%CI, 1.24-5.77). Other characteristics including age, diagnosis, preparative regimen, source of stem cells, or type of donor was not associated with bacteremia. Patients with bacteremia had a higher rate of mortality compared to those without bacteremia (36.4% vs 13.3%, p=0.001). No serious complication associated with ciprofloxacin or penicillin V was found in this study. In conclusion, this study demonstrated the feasibility and efficacy of ciprofloxacin and penicillin V prophylaxis in children underwent HSCT. ATG-containing preparative regimen was the significant risk for bacteremia during neutropenic episodes.

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Utility of Outpatient Surveillance Blood Cultures in Hematopoietic Allograft Recipients on High-Dose Glucocorticoids for Treatment of Graft-Versus-Host-Disease

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Background: Glucocorticoids used to treat acute graft-versus-host-disease (GVHD) are thought to blunt clinical symptoms of infection. We set out to address the value of weekly surveillance blood cultures drawn from patients receiving high-dose glucocorticoids in the outpatient department (OPD), and to characterize isolated pathogens, antibiotic use and outcomes in patients undergoing such surveillance.
Methods: We conducted a retrospective review of blood cultures collected from a cohort of hematopoietic cell transplantation (HCT) patients enrolled in a clinical trial of GVHD ($\geq$ grade II) therapy who were treated with high-dose glucocorticoids (defined as a prednisone dose $\geq$ 0.5 mg/kg/day). Surveillance blood cultures were defined as those collected weekly in the OPD while patients were receiving high-dose glucocorticoids. Cultures obtained as part of a symptom work-up (e.g. fevers, chills or rigors) or as follow-up for documented bacteremia were considered non-surveillance cultures. Clinical data were collected using center databases supplemented by medical record review.
Results: A total of 138 adult HCT recipients were eligible for inclusion in the study. Patients were excluded from analyses if they never had surveillance blood cultures (n=7) or were inpatient during the study period (n=4). Of the remaining 127 subjects, 1082 outpatient cultures were obtained, for a median of 8 cultures (interquartile range [IQR]; 5-10) per patient; the majority of which were surveillance cultures (1020 [94%]). Bacteria were isolated from 48 of 1082 cultures (4.4%), or 1 positive culture per 24.5 blood cultures drawn. Significantly fewer surveillance compared to non-surveillance cultures isolated organisms (41/1020 [4.0%] vs. 7/82 [8.5%], p=0.007). The most frequently detected pathogen was coagulase-negative Staphylococcus (28/1082 [2.7%]). Gram negative rod (GNR) pathogens were rare (10/1082 [0.9%], 3 Serratia, 2 Enterobacter and 1 Pseudomonas, *E. coli*, Bacteroides, Stenotrophomonas and Klebsiella), and a similar number GNRs were detected from surveillance and non-surveillance cultures (p=0.56). Antibiotics were administered to nearly all patients with positive surveillance cultures (38/41 [93%]), and one in 4 was admitted to the hospital for treatment; none needed ICU care or died from their infection.
Conclusions: Weekly outpatient surveillance blood cultures obtained from hematopoietic allograft recipients on high-dose glucocorticoids were infrequently positive, and the majority of isolates were low-risk pathogens. Although this screening approach appeared to have limited value and may lead to excess antibiotic exposure, future prospective studies are needed to confirm our findings in this high-risk population.

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Single Donor Vs. Acrodose Platelets in Oncology Patients: A Single Institutional Experience

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Abstract: Patients undergoing hematopoietic stem cell transplantation or myelosuppressive chemotherapy for solid and hematologic malignancies have the propensity to develop thrombocytopenia to the point where they will require prophylactic platelet transfusions once their level falls below ten thousand. In our institution, the primary replacement product is single donor platelets. Recently, there has been the advent of Acrodose platelets which are obtained from whole blood. These platelets are leuko-reduced, ABO matched, pooled and bacteria tested making them "transfusion ready" for the hospital. It lowers handling costs at the hospital by eliminating the need for pooling and bacterial testing at the hospital. The Acrodose system can detect >1 CFU/ml of bacteria at a rate of 99.3% thus reducing the risks of false positives. Each unit of Acrodose platelets contains pools of 4-6 units of leuko-reduced platelet concentrates in plasma.
Methods: Data was collected from October 2012 to October 2013. There were a total of 349 platelet transfusions given, 61 were Acrodose and 288 were single donor. There were 17 bone marrow transplant patients of which 16 were autologous (7 had multiple myeloma, 8 had Non-Hodgkin's lymphoma and 1 had POEMS syndrome) and 1 was allogeneic for chronic lymphocytic leukemia. In addition, there were 20 acute leukemia patients. The bone marrow transplant patients received a total of 45 platelet transfusions of which 37 were single donor and 8 were Acrodose. The acute leukemia patients received a total of 150 platelet transfusions of which 17 were Acrodose and 133 were single donor.